SuperPi

DAPP+NFT+DEFI+GamFi

whitepaper

version v2.0

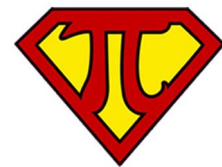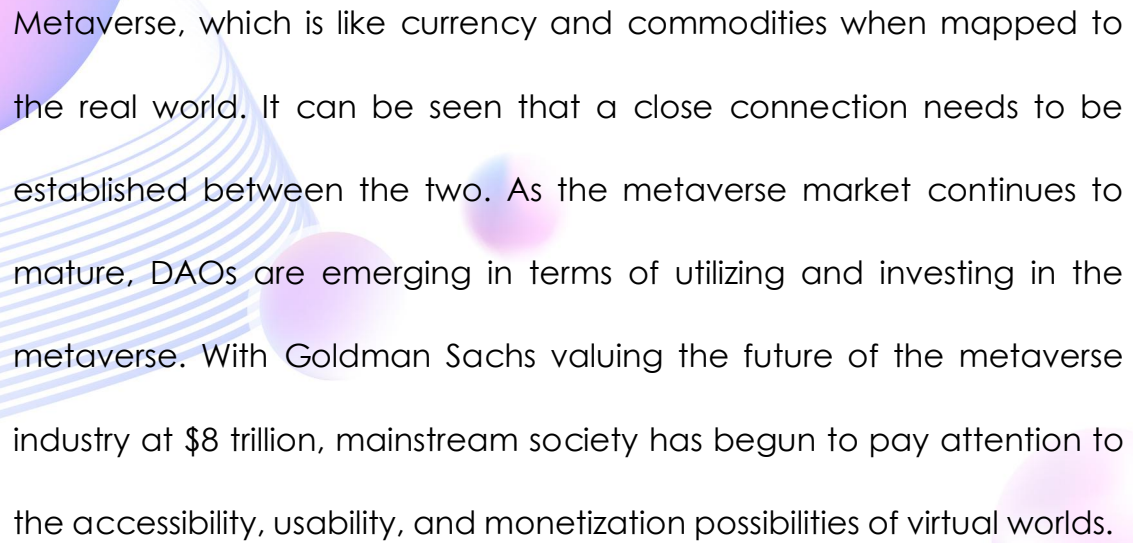2022.3

Content

SuperPi

2、Introduction

If 2020 is the first year of DEFI and 2021 is the first year of NFT, then 2022 will be the first year of DAO.

The full name of DAO is Decentralized Autonomous Corporations, which means Decentralized Autonomous Organization. It relies on smart contracts to run on the blockchain and has no legal entity. The concept of DAO was first proposed by Vitalik Buterin, the founder of Ethereum. In 2016, TheDAO, the first DAO project, raised over $50 million in 15 days. It was the largest crowdfunding project on Ethereum at that time. One-third of the assets were stolen, which also directly led to the hard fork of Ethereum.

After TheDAO, DAO has developed rapidly. According to Deep DAO data, as of December 2021, DAO's total asset management scale is 12.8 billion US dollars. Compared with the first half of the year, the scale of funds deposited by DAOs has increased by 1422%. There are a total of 186 DAOs, and the cumulative number of members of these DAOs and members holding tokens totals 17 million. A report from blockchain research institute Messari believes that "DAO will become the next big trend in the development of the times".

After the explosion of the Metaverse, people believe that DeFi is the economic system of the Metaverse, and NFT is the asset of the

SuperPi

Metaverse, which is like currency and commodities when mapped to the real world. It can be seen that a close connection needs to be established between the two. As the metaverse market continues to mature, DAOs are emerging in terms of utilizing and investing in the metaverse. With Goldman Sachs valuing the future of the metaverse industry at $8 trillion, mainstream society has begun to pay attention to the accessibility, usability, and monetization possibilities of virtual worlds.

DAO can make virtual land more accessible and help newcomers join Web3 to explore ways to share, rent, and invest in digital finance in the metaverse.

3、 Present to SuperPi

DAPP+NFT+DEFI+GamFi

=SuperPi Decentralized Ecological Financial Liquidity Model

It's a global autonomy

Community

of the people of the world

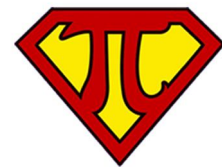Bank

is shared by everyone

financial social network

when the old order is broken

When man is no longer the master of all things

When the trust between people is as thin as a cicada's wings

When the huge computing power market is no longer flexible and
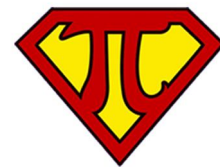
transparent

The future world constructed by the core spirit of DAO will make us

more confident.

SuperPi is committed to providing a more open and flexible decentralized financial service platform. Celsius Network, a well-known encrypted digital currency platform, completed the first round of angel financing on behalf of the market, providing original BSC protocol tokens and adopting the form of community DAO governance. With the addition of various new ways of financial derivatives, users can reduce economic losses caused by opaque computing power-related information.

SuperPi is a digital asset aggregator for an ecosystem that is fully developed in the scalable field of DAPP+NFT+DEFI+GamFi. Darwin's "Origin of Species" tells us: "natural selection, survival of the fittest." With the complexity of the environment Change, people's competition is no longer a mechanical struggle, but a human cognitive competition for the essential laws of all things in the world. The system developed by SuperPi based on the bottom layer of the BSC smart chain protocol is a very innovative model, and this innovation is not an innovation in packaging, but an innovation in nature. Although the cost is high, it has no competitors.

SuperPi is an open, distributed, decentralized and integrated cryptocurrency ecosystem built with multiple ecological links such as ownership, games, NFT, DAO, oracles, DEX, and DFT trading markets. Scenario, through the collaboration of the SuperPi ecosystem, to build a

SuperPi

public chain, distributed financial infrastructure, and financial service protocols in one, to provide users with a comprehensive, safe, efficient, and free comprehensive service platform.

2.1 About SuperPi

Vision of SuperPi:

A Great Era of Liquid Finance in One Year

Mission of SuperPi:

Promoting the development of a decentralized financial community

Fusion of NFT+DEFI

Digital assetization → asset digitization

Today, SuperPi will once again lead the Renren financial revolution under the current DeFi technology.

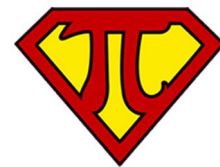## 2.2 The complete ecosystem of SuperPi

With the vigorous development of the digital world, NFTs have also begun to tokenize real-world assets. These NFT assets can represent partial ownership of real-world assets and are stored or traded in the
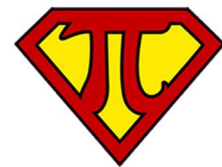
blockchain network in the form of tokens. Once applied, it can bring much-needed liquidity to the illiquid market of art, real estate, and rare collectibles, and it is also the re-empowerment of on-chain assets for off-chain value. The digital asset platform on the SuperPi chain is committed to promoting the tokenized mapping of real world objects and NFTs in the blockchain world. We combine physical objects, NFT and DeFi models, and create SuperPi based on NFT technology to endow physical assets with financial attributes. Identity, so as to achieve Value sublimation.

As the world's first financial platform integrating DeFi+NFT+DAO digital ecology, SuperPi is committed to observing and researching user needs, continuously optimizing ecological application-related functions such as games, NFT, and transactions, and combining rich industry experience according to industry trends As well as the real needs of trading users in the cryptocurrency market, we innovatively propose and continue to try new breakthroughs to provide the market with experience and services that are more in line with the needs of trading users.

Based on the understanding of the entire market and the control of industry trends, SuperPi has carried out bold innovation and integration of the main business of the platform with DeFi projects. With the continuous optimization of the DeFi market infrastructure, there are

SuperPi

people in the market who continue to profit from DeFi, the number of users participating in DeFi investment in the market continues to increase, and the trading demands for DeFi projects are gradually diversifying.

The ecosystem we create will be built from four aspects:

1) NFT token

The non-homogeneous assets on the physical mapping chain can be mapped one by one with the real physical objects. While increasing the liquidity of assets, it can improve security and reduce the trust threshold between flows. It is the core asset certificate of SuperPi.
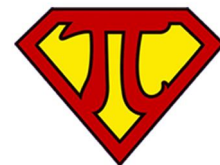
2) BSC Smart Chain DeFi

SuperPi will log in to the BSC smart chain ecosystem to increase the ecological scope of SuperPi, and also lay a solid foundation for the cross-chain launch of the public chain in the future.

3) SuperPi Token

SuperPi, the only governance token in the SuperPi ecosystem, enjoys a variety of rights and interests, and truly implements Dao's governance system. Holding SuperPi will participate in the proposal and ecological governance of the SuperPi system.

4) Virtual assets

High-value virtual assets, virtual assets participating in the SuperPi ecosystem can participate in the mapping of ecological NFTs, and
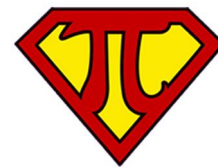
SuperPi

participate in the circulation of ecological NFTs and SuperPi. In the early stage, virtual assets will be launched in Sberbank's blockchain technology theme commemorative brand, which will be launched in the later stage. More real assets The new model of the digital asset platform on the SuperPi chain will completely break the barriers between real collections and blockchain digital tokens, and achieve perfect interoperability, and this concept is currently unique in the world.

5) Staking mining + interactive chain game

With the popularity of the metaverse concept, game+defi has become a new track and opportunity. Playing and earning in the game is the original idea of the entire chain game ecology. However, compared with traditional games, chain games seem to be less Some sense of interaction and operability.

Based on this pain point, SuperPi launched the gamfi game of pledge mining + interactive chain game, focusing on players' sense of participation and experience. Just 10 years ago, gamers were a negative image, people would think that they were not sociable, unprofessional, with no stable development and prospects. Now, there are 2.8 billion gamers in the world, and everyone's views and attitudes towards gamers have changed dramatically. Today's blockchain is like a game 10 years ago, and the interactive experience of games on the

SuperPi

SuperPi chain can change ordinary people's views on blockchain technology. "

SuperPi will be developed according to the main line of launching interactive chain games + pledge mining first, launching NFT market in the mid-term, and then launching metaverse games. In order of difficulty, this pace of development is relatively steady.

3. SuperPi economic model
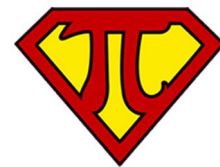
English full name: SuperPi

Token: SuperPi

Total issuance: fair launch of

100000000000010000000000000000000000000000

Consensus mechanism: from 0 to 1

Core advantages: As early as 2020, the SuperPi project party has been preparing for the construction of the underlying technology, and it will be launched globally in March 2022. At present, the overseas promotion is progressing very smoothly, and we think the Chinese market will have very good growth. It will continue to require Chinese companies to carry out in-depth cooperation, and it will be released for the first time in the Asian market. SuperPi does not sell tokens in any form. The tokens are only used to reward players who help the community
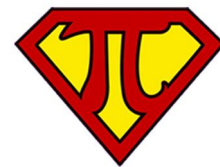
achieve project tasks, and participate in this project and provide Players who contribute effectively.

Aims to really solve puzzles on a huge scale and really help players in need. This is SuperPi's innovative distribution model, a brand-new, open and great exploration of the future and the bright. Decentralized chain reform ecology applied to SuperPi financial platform.

The total supply is 10000000000010000000000000000000000000000, and 12% of the transaction amount is deducted from each transaction, based on the mechanism of smart contracts. Among them, 100% of the number of tokens will be added to the fund pool.

New ideas lead to new consensus, and new consensus leads to new development. SuperPi is an intelligent, credible and open digital application ecosystem, and an innovative application of blockchain technology in the digital field. Based on the most trending and promising asset synthesis and decentralized derivatives in the current defi field, SuperPi creates an asset mall in the defi field by de-neutralizing the creativity and aggregation of financial products. In this ecology, SuperPi acts as the At the same time as the platform token, it plays the role of facility token, chain game token and governance token. While promoting the continuous growth of the platform, SuperPi itself also grows into a valuable currency!

SuperPi

4. SuperPi Ecosystem: From 0 to 1

In order to flourish this ecosystem, SuperPi is committed to building a bridge between the Metaverse to communicate with each other. At this stage, a digital token is established to link the mutual cooperation between various systems such as DAO DeFi, SWAP, NFT + GameFi, etc., to promote the development of the SuperPi Metaverse Road.

SuperPi starts from a dream, from 0, everything starts from 0. From starting an idea, to the final 1, creating a multiverse metaverse ecosystem where users and creators can have equal opportunities to participate. The powerful ecology that SuperPi connects to provides users with a more immersive and "real" digital financial world, bringing users into a more immersive augmented reality metaverse digital world as it continues to shorten our The gap between the physical world and the virtual world.

The SuperPi ecosystem innovatively absorbs and abandons the traditional Internet and business models, and uses the underlying blockchain technology to create a new open and decentralized application form for users. SuperPi is a blockchain new financial solution based on underlying technology. Through the underlying cross-chain technology, link the main network of various blockchains in the decentralized world, create an open-source, decentralized,

SuperPi

high-performance value network, empower the financial industry, and open a new financial era of blockchain.

SuperPi is used to run decentralized finance and intelligent business applications. Based on the open source protocol proposed by BSC, it has been improved and expanded in combination with the current status of the digital asset industry and risk control requirements, brea the economic closure of defi 2.0 and redefining the concept of def We connect virtual digital assets and real assets through technology to ensure the authenticity and consistency of on-chain digital assets and off-chain real assets, and on-chain IDs and real identities.

Introduction to SuperPi Ecosystem

All the wealth comes side by side out of thin air

Assets: some of the resources you acquire

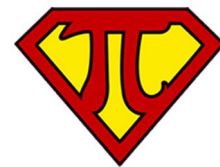**Value:** The end use of the resource

Wealth: Unlimited Expansion

of Resource Use

What caused the appreciation?

Mechanism that allows incentives to form

a source of perpetual motion

Scarce, rare is precious

scramble, herding

leverage, magnify with multiples

belief, desire to possess

application, supply changes

SupperPi value rise logic

The combination of NFT+DEFI symbiosis drives the value of SuperPi

The significance of the existence of the consumer economic

symbiosis is to enhance the belief of the SuperPi community, and to

regulate the supply according to the market, so that SuperPi will always

be pulled up in the direction of the established value. In the later stage,

pledge mining + interactive chain games will be introduced. SuperPi

started from 0.1BNB, and our goal is 100,000bnb. Our logical process of

value increase is to move from ordinary tokens to NFT free trading and

chain game evolution.

SuperPi is a great ecology

The advent of BTC has brought people a microcosm of a true

decentralized consensus society in which no one is responsible and

SuperPi

everyone is responsible.

Such a simple epitome is the perfect realization of the entire utopia. And fundamentally, the reason why BTC has so many beliefs,
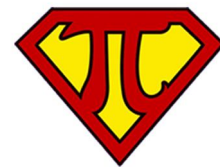
It is precisely because of the open source of its code and the disappearance of Satoshi Nakamoto that an independent community that relies entirely on consensus autonomy has become a reality.

Starting from SuperPi's vision of "helping those who help themselves", we also hope to create a community without teams, decentralized, and based on everyone's self-help consensus. Therefore, in the SuperPi self-help community, SuperPi does not belong to any organization, it only belongs to every human who believes in SuperPi and continues to improve themselves.

SuperPi = a mature autonomous community

SuperPi will reunite NFT assets and users through DeFi, and form an orderly autonomous community through SuperPi,

And pass the Renren financial concept to more people. In the past, the process was extremely slow due to the constraints of technology, but SuperPi will be the first to open a new decentralized DeFi liquidity ecosystem. Based on the more extended functions of SuperPi, every user can find a new role: suppliers, promoters, and developers can all be done by themselves, contracts and contracts are automatically

SuperPi

executed, SuperPi value flows freely and unimpeded, and the

community atmosphere presents an extremely positive atmosphere

status.

The future ecological panorama that is enough to shake the world

The ecology of SuperPi will be a collection of all scenarios such as

DeFi finance, entertainment interaction, trading, media marketing, life

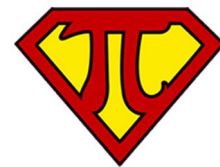services, and development platforms.

In the balanced world of SuperPi, liquidity is the power of all and the

mission of all. They can use all resources to achieve self-realization, while

all realizations are

Will leave an unprecedented wealth to the world

SuperPi = integration of times

As the integrator of the DeFi era leading the revolution, SuperPi is

fully capable of creating a new financial system in terms of the depth of

decentralization theory and the strength of the NFT+DEFI combination,

supporting the myth of tokens that will never fall.

A new ecosystem that surpasses the existing DeFi volume is

emerging, the future has arrived, and SuperPi will surely become the

leader in the future.

SuperPi

5. SuperPi technical description

5.1 Differential Group Key Encryption

Since the current public key platform cannot cope with the massive, concurrent, wide user, real-time, cross-platform massive P2P encrypted data computing needs, ETD uses the differential group key broadcast encryption technology, which brings the following breakthroughs:

High speed (can be used for massive distributed P2P)

Security (160-bit DGK=1024-bit RSA)

Large scale scalability (processing billion level)

Fixed storage capacity (client only 60 bits)

Low CPU requirements (as low as 10MHz)

It realizes the safe, reliable and efficient processing of user data for the application side of the scene (such as IoT/computer/VR equipment), which makes the data security encryption operation an effective part of the chip solution and supports various applications at the IoT level.

5.2 Encryption algorithm

SuperPi
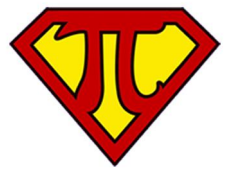
1. Key Engine: Its main function is to generate a public key and a corresponding set of private keys.

- Generate a bilinear mapping group G of p-index (p is a prime number), and its corresponding elliptic curve G^N

- Randomization of the initial system; randomly generate a generator sub-element g of the group G, which meets the requirements of the corresponding elliptic curve

- System randomization; randomly generate an element a from the group Z_p of modulo integers

- For $i=1,2,\cdots,n,n+2,\cdots,2n$, use elliptic curve G^N and bilinear mapping to generate: $g_i=g^{(a^i)}$

- Randomly select an element r that is bilinear coprime to a in the group Z_p of modulo integers

- Calculate the corresponding point $v=g^r$ on the elliptic curve

- Generate public key $PK=(g,g_1,\cdots,g_n,g_{n+2},\cdots,g_{2n},v)$, belonging to $G^{(2n+1)}$

- For each user $j=1,2,\cdots,n$, the corresponding private key d_j is generated by the bilinear mapping of the elliptic curve: $d_j=(g_j)^r$

2. Byzantine Prevention and Control Engine: Its main function is to generate SuperPi keys and public cipher text (stored in the SuperPi data stream).
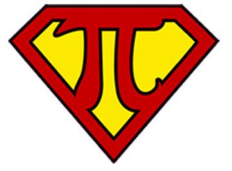
- System randomization; randomly generate elements t in the group

Z_p of modulus integers that satisfy bilinear coprime

- generate g_1, g_(n+1)

- Calculate the point on the elliptic curve corresponding to the

mapping e(g_n, g_1) using the bilinear mapping

- Calculate e(g_(n+1),g) using bilinear mapping and elliptic curve

- Use bilinear mapping and elliptic curve to generate session key K=

e(g_(n+1),g)^t

- Generate public cipher text H:

$$H = \left(g^t, \ \left(v \cdot \prod_{j \in S} g_{n+1-j} \right)^t \right) \in \mathbb{G}^2$$

3. SuperPi Decryption Engine: Its main function is to recover a CPCB

key using the public key, complete file header and private key, and

then use this CPCB key to perform operations on the encrypted CPCB

data.

- System randomization; generates corresponding paired

sequences on elliptic curves

- Extract the user mask from the full file header

- Calculated using bilinear mapping and elliptic curve

$$\prod_{j \in S} g_{n+1-j} \qquad \prod_{\substack{j \in S \\ j \neq i}} g_{n+1-j+i}$$

Extract the public cipher text H in the full file header

SuperPi

- Calculated using bilinear mapping (C_0, C_1)

- Calculated using bilinear mapping and elliptic curve

$$e(g_i, C_1) \ / \ e(d_i \cdot \prod_{\substack{j \in S \\ j \neq i}} g_{n+1-j+i}, \ C_0)$$

Calculate the session key K:

$$e(g^{(\alpha^i)}, (v \cdot \prod_{j \in S} g_{n+1-j})^t) \ / \ e(v^{(\alpha^i)} \cdot \prod_{\substack{j \in S \\ j \neq i}} g_{n+1-j+i}, \ g^t)$$

- Improve storage/read and write performance: calculation/storage is the calculation mechanism. Distributed computing/storage realizes an efficient matching operation mechanism under the condition of encrypted PCB. Instead of (encryption operation + propagation + decryption operation + matching operation) multiplied by N, multiplied by M, the PCB realizes (O(1) encryption matching operation) * logN * logM calculation. Data storage changes from N *Size L * replication factor K (generally K is in the range of 20-100 - like IPFS) to (logN)^2 * (logL)^2 * k for SuperPi PCB (here k is greater than 1 but less than 1.2 ~ 1.3).

- Improve communication performance: The improvement of communication performance is achieved under the condition of ensuring data encryption. Simple Merkel tree cannot provide support for encrypted data. SuperPi PCB uses the differential group key broadcast encryption algorithm to bind data encryption and data

SuperPi

structure optimization (saving communication bandwidth resources) to achieve O(1) data communication requirements (compared to Merkel tree or DAG based graphs) O(log) requirements for other data structures).
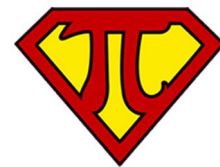
Improve the performance of public chain data operations: 1) Comprehensive optimization goals for computing/storage/communication; 2) SuperPi's key distribution mechanism avoids the transmission and distribution of keys, improving security and computing efficiency; 3) Customizable Calculation or storage/communication module; 4) Composite algorithm against statistical learning; 5) Parallel subdivision of matching operators, supporting parallel algorithms and intermediate/partial matching results; 6) Distributed storage of infinite/arbitrary subdivision of data , support reorganization in encrypted state (composite operator); 7) support PoC/PoE consensus mechanism, and any general or customized consensus algorithm;

SuperPi can effectively resist malicious attacks from the network (the cost of the attack is not only the consumption of computing resources - because of the encryption characteristics of data, it is difficult to launch an attack on a node or an application/service unless the data is decrypted - at the same time It also consumes network

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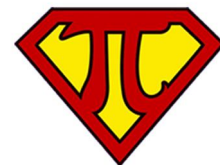
bandwidth and storage resources) Therefore, the distribution of the computing power field can be set for Dapp. In the double-blind matching computing environment, nodes can accumulate and analyze historical data. Even in the case of double-blindness, they can still use machine learning to store high-frequency service requests or high-frequency paired users (although I don't know the specifics). service and username - due to data encryption). In this way, nodes can only store high-frequency data, which makes the system lose fairness (or for low-frequency services and users, the system service performance is greatly reduced). In order to ensure service quality, the reward mechanism for low-frequency data can be improved, or fixed computing power The computing mechanism of the field (for example, the computing share of the computing power field fluctuates between 30% and 50% to ensure sufficient computing power and storage to meet any high and low frequency matching needs).

SuperPi

6. SuperPi core team

CEO Nikolay Park

Master of Finance from MIT, former Quantum Fund investment manager, founder and CEO of SuperPi, led SuperPi to complete multiple rounds of financing, Park is also the core figure of the American Ivy Foundation, has rich experience in financial trading, and led the foundation to complete more than 40 rounds of financing. cooperation on 5 projects, including 5 cooperation with listed companies. These public companies include Microsoft, Dish Network, FTI Consulting, Enviva Partners and Lenovo;
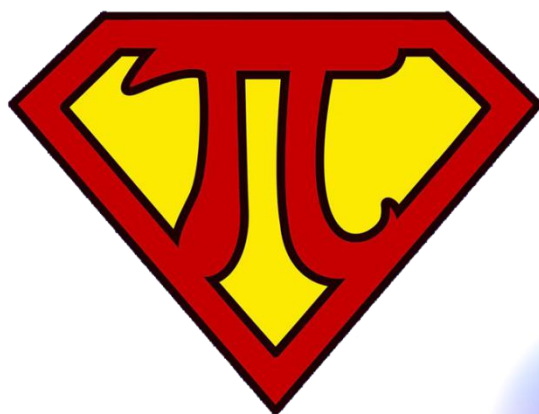
CTO Rogan Parez

Director of Communication Lab at Imperial University, former Vice President of Software at Cassia Networks, Chief Engineer of H3C Wireless LAN, Founder and CEO of Wonderlan Technology. 10 17 years of IT industry work experience, 6 years of blockchain industry development experience, proficient in blockchain-related technologies, involving public chains, alliance chains, private chains, cryptography, smart contracts, etc., and with top blockchain technology around the world. Chain developers maintain good communication and exchanges;
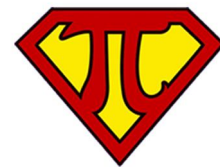
Chief Designer Pisco Gaard

 Master of Fine Arts, University of Pennsylvania, USA, joined 343

Industries in 2012 and participated in the development of "Halo 5" and

"Halo: Infinite". Years of entrepreneurial experience in the game industry

have allowed Pisco to accumulate a huge network of game resources.

He is the senior game designer of "The Elder Scrolls 4" and "Fallout 3", and

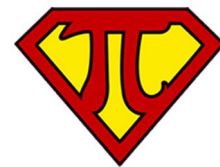the chief designer of "The Elder Scrolls 5: Skyrim";

CFO: fantianmi JackMao

Excellent technical expert in the field of blockchain, graduated from the National University of Singapore, and has been involved in technical work in the field of Bitcoin and blockchain since 2011. He used to be the founder and CEO of Travel Nation Media Pte Ltd.

7. DAO governance of SuperPi

SuperPiDAO is a pan-industry decentralized application beyond the scope of currency and finance, such as applications in the fields of government, medical care, science, culture, games and art, involving new concepts such as cross-chain communication, multi-chain collaboration, and distributed social networks. Under the guidance of the current Play-to-Earn hot model, we will democratize the construction of SuperPi DAO, mint non-fungible tokens (NFT) to generate real cash flow, and plan to build a complete business chain for its surrounding industries, including Brain-computer interface technology, digital property rights, digital business incubation, AR technology, etc., and subdivide users into DAO members specific to a certain ecology, expanding to a new virtual world - SuperPi Metaverse.

SuperPi DAO currently serves the construction of the metaverse in

the form of a blockchain industry fund, with a capital scale of US$1

billion. It can provide services such as funds and resources for more

high-quality facilities in the SuperPi metaverse, and actively explore the

innovation of blockchain + games and development, in order to

promote the integration and implementation of blockchain

enterprise-level applications, provide good products and services to

differentiated markets, and call on more institutions with the same

values to participate together to jointly create a decentralized business

in the digital economy era. world.

8. Future planning of SuperPi

SuperPi really starts from 0, everything starts from 0. The initial coin

offering price is 0.1BNB.
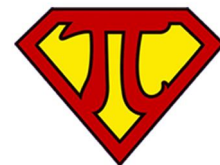
1. The first stage

Q4 2021

Team building, economic model design and improvement

1. The second stage

Q1 2022

Official website white paper production and smart contract

development

SuperPi

Q1 2022

SuperPi officially launched

3. The third stage

Q3 2022

Holders grow rapidly

Q4 2022

Launched DAPP for SuperPi pledge mining

Q2 2023

Continue to promote, and launch the interactive chain game

SuperPi Game to earn while playing.

Q4 2023

Connect with the three major exchanges and arrange SuperPi to

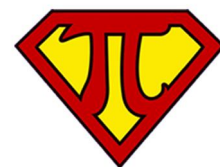be listed on the centralized exchange

4. The fourth stage

Q2 2024

Forming a Count Dow metaverse ecological closed loop of

DAO+DeFi+Gamefi+NFT

The number of token holders has grown significantly, and the

100,000 times plan is about to be realized
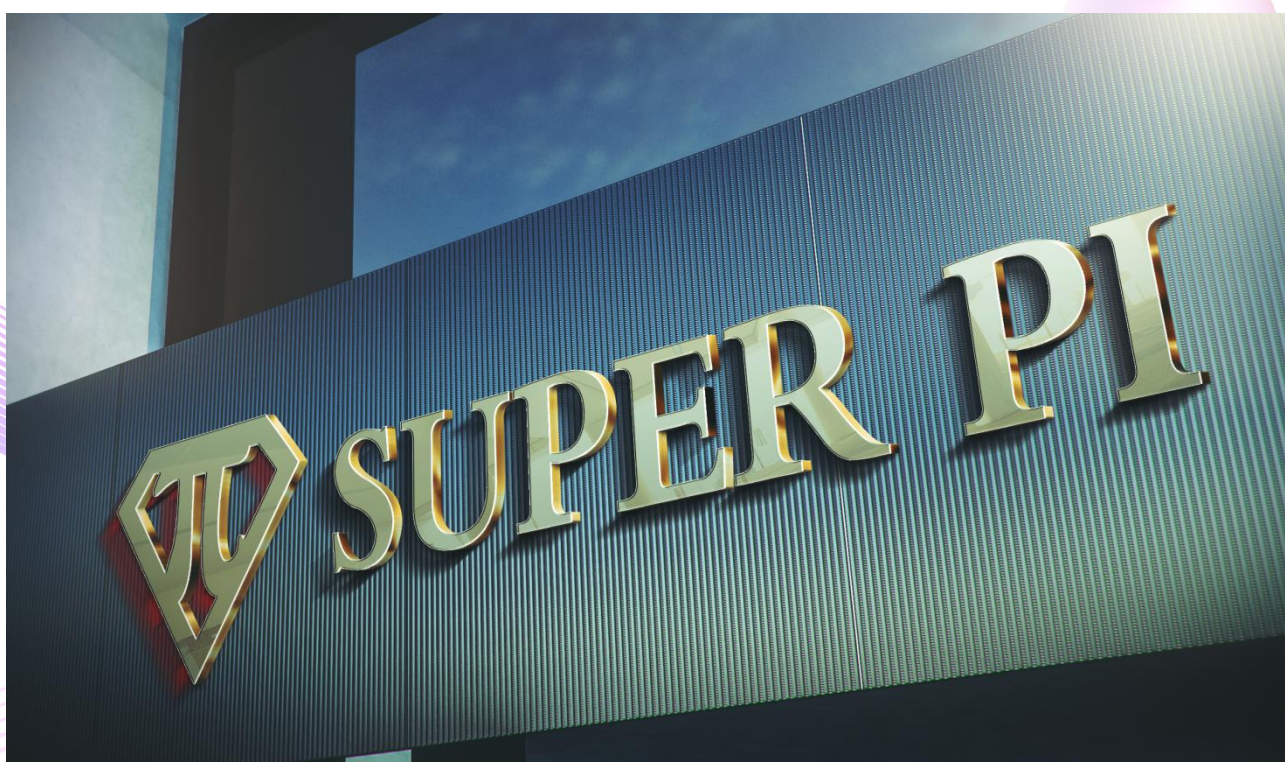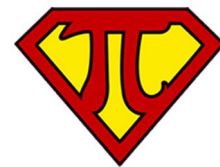
5. The fifth stage

SuperPi

Q2 2025

Established the SuperPi ecological company to tackle the 100,000 times plan in all aspects

Q4 2025

Achieving the vision from 0 to 1, at this time, SuperPi's 100,000 times plan is realized.
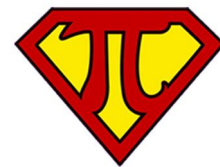
SuperPi

Epilogue

The world's first financial platform integrating DeFi+NFT+DAO+GamFi ecology will be launched globally, which is a small foothold in SuperPi's journey of continuous exploration and innovation. SuperPi always believes that sustainable products and development not only depend on the constantly updated market user needs, but also take into account the benefits and risks of users. Taking these factors into consideration and making breakthrough innovations can ultimately create the most Products and services that meet user preferences and are most suitable for the market.

Use strength to create value, use technology to create a better future, SuperPi builds a bridge between digital finance and the real world, and shapes new industrial momentum. SuperPi consensus ecology drives the future, giving DeFi+NFT+DAO ecology unlimited appreciation potential, SuperPi will lead a new wealth world , lead investors to catch the wealth express, overtake on the curve, and realize the freedom and dream of wealth in life!

Join the world of SuperPi now

Renren Finance Awakens Wealth Freedom

Infinite Possibilities Hope to have you

SuperPi

Risk Warning & Disclaimer

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Any investment involves significant risks, including but not limited to price volatility, illiquidity and potential loss of principal. Investors should conduct independent due diligence on the topics discussed in this document, with the assistance of professional financial, legal and tax experts, and exercise independent judgment on the relevant market before making any investment decision.

The information contained in this document may include certain forward-looking statements, and no representations or warranties are made as to the accuracy of such forward-looking statements. Any projections and assessments contained in this document are speculative and based on certain assumptions.

SuperPi